

## **ABSTRACT**

### **“A study on SALVAGE SURGERY IN DIABETIC FOOT SYNDROME IN VIEW OF MAXIMAL PRESERVATION OF THE LIMB”**

#### **INTRODUCTION**

Diabetic foot ulcer is most devastating complication of diabetes mellitus affecting 15 % of patients. Early effective management of diabetic foot ulcer reduces severity of complications such as avoidable amputations and mortality. Surgery to heal chronic ulcer and prevent recurrence should be considered as a component of management. Hyperbaric O<sub>2</sub> therapy, electrical stimulation, negative pressure wound therapy, bio-engineered skin and growth factors are adjuncts for rapid healing. The neuropathic complications lead to complete loss of sensation in foot and leg, this condition is known as diabetic neuropathy. The improper blood flow leads to ulceration. The diabetic foot ulcers are difficult to heal as the wound does not get enough nutrients or oxygen from blood, leading to the risk of lower limb amputation.

#### **AIMS & OBJECTIVES**

One of the most important strategies for the management of the diabetic foot is to prevent complications that may necessitate a major limb amputation. Even with appropriate treatment, some patients must undergo major amputation or a limb salvage operation. The key to limb salvage surgery is maximal retention of the limb and minimization of the amputation level. Successful limb salvage, defined as a stump fit for functional ambulation, is mostly determined by the level of amputation. It is mostly affected by preservation of the talus and calcaneus because it minimizes limb length discrepancy and preserves the heel pad.

## **METHODOLOGY**

The purpose of this article is to provide information on determining the optimal amputation level, preserving as much limb length as possible without requiring additional reamputation by analyzing several predictive factors in 100 patients requiring limb salvage surgery for diabetic foot gangrene. According to the final level of amputation, the patients were divided into two groups: Patients with primary success of the limb salvage, and patients that failed to heal after the primary limb salvage surgery. A preoperative ARTERIAL DOPPLER STUDY was performed in all patients to evaluate the number of abnormal vessels and the state (patent, partial occlusion, total occlusion) of each vessel of the lower extremity.

## **DISCUSSION**

The objective of this study was to identify any predictive factors of limb salvage success for patients with diabetic foot complications. .

Risk factors are important in predicting the prognosis of ulceration, yet many patients already have intractable ulceration prior to hospital admission. As a result, these studies are less helpful for the prognosis of patients in need of surgery for complicated diabetic foot.

CT angiogram was used to identify the status of the blood vessels prior to surgery and has been proven effective in prior studies. . Nevertheless, no studies have examined the failure of limb salvage surgery using the results of CT angiography until now.

In the results of this study, the greater the number of damaged vessels as shown on CT angiogram, the greater was the difference of the odds ratio between the two groups. The number of normal blood vessels and the condition of each of the blood vessels had an effect on the results.

## **CONCLUSION**

### **This study shows that:**

1. This study evaluated the factors predictive of the success of limb salvage surgery and identified indicators for preserving the limbs of patients with diabetic foot complications, allowing the establishment of an appropriate amputation level of the diabetic foot and minimizing subsequent operations.
2. There exists a statistically significant correlation between this scoring system and its prediction towards operative management for the patients.
3. Management of aetiological factors like vasculopathy, neuropathy and infection is essential to get good outcomes. Amputation is usually used as a last resort in non-salvageable limbs. Above all, this is one condition which proves the maxim that “prevention is better than cure”.